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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,046	11/26/2003	Hui Peng		7825

7590 09/08/2005

Hui Peng  
35964 Vivian Place  
Fremont, CA 94536

EXAMINER
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HU, SHOUXIANG

ART UNIT.	PAPER NUMBER
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2811

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/723,046

Applicant(s)

PENG, HUI

Examiner

Shouxiang Hu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 27 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restriction and Response to Amendment***

Amendment and election filed on March 18, 2005 and June 27, 2005 are objected to, because some of the claims, including claims such as claims 1, 6 and 8, have been amended therein, but no marked version for the changes made to these claims have been included.

In addition, it appears that applicant has decided to cancel claims 9-23; but, the identifier of "Canceled", instead of "deleted", should be used to indicate the status of being canceled for these claims. And, applicant is required to confirm the status of these claims as "Canceled" in any further response to this Office action.

### ***Claim Objections***

Claims 1-8 are objected to because of the following informalities and/or defects:

In claim 1, the term of "the top of" should read as: --a top--.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-5 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Wada et al. ("Wada"; US 6,797,416).

Wada discloses a light-emitting semiconductor device (Figs. 1-7, especially Figs. 1B and 7; also see col. 2, lines 41-52), comprising: a substrate (1; or 1-3) having a top surface with texture (having patterned wells 3b therein) thereon; a buffer layer 7; and an epitaxial layer/active layer (19-24) formed on the texture (3b), wherein the texture comprises wells (3b) with walls therebetween, each having a dimension and a depth in microns.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wada in view of Sunakawa (Sunakawa et al., US 6,348,096).

The disclosure of Wada is discussed as applied to claims 1-5 and 8 above.

Although Wada does not expressly disclose that the wells in the texture can also have a shape of rectangular, one of ordinary skill in the art would readily recognize that

the well shape in the texture is a well recognized parameter of importance subject to routine experimentation and optimization; and that such a rectangular-shaped well texture is commonly used in the art for obtained epitaxially growth layer(s) with improved quality, as evidenced in Sunakawa (see the rectangular-shaped wells 34 in Fig. 4c).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the rectangular-shaped wells of Sunakawa, into the device of Wada, so that a semiconductor device with improved quality in the epitaxial layers therein would be obtained.

### ***Response to Arguments***

Applicant's arguments filed on March 18, 2005 and June 27, 2005 have been fully considered but they are not persuasive.

Applicant's main arguments include: Wada does not disclose the claimed invention, as the instant invention distinguishes from the one of Wada in features including structure, process and results. In response, it is noted that the light-emitting semiconductor device of Wada as shown in Figs. 1B and 7 does disclose the claimed invention as it does comprise a texture having patterned wells 3b therein; as either layer 1 or layers 1-3 can be regarded as a substrate for the active layer grown thereon, and as the texture in Wada is indeed formed on a top surface of such a substrate, since the word of "on" does not have to be interpreted to have the meaning of "in direct contact".

Furthermore, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which

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applicant relies (i.e., the texture is directly formed on the base substrate, and the other alleged distinguishable features) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shouxiang Hu whose telephone number is 571-272-

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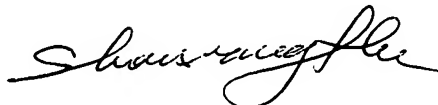
1654. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eddie C. Lee can be reached on 571-272-1732. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH

September 1, 2005



**SHOUXIANG HU**  
**PRIMARY EXAMINER**